

Remarks

Claims 1-26 are pending in the current application. Claims 1, 9, 15 and 21 are independent claims.

35 U.S.C. § 102 (E) TAKANO

Claims 1, 2, 4, 8, 9, 15, 21 and 22 stand rejected under 35 U.S.C. § 102 (e) as being anticipated by Takano. Applicant respectfully traverses this art grounds of rejection.

Takano discloses a method and apparatus for controlling transmission power in a cellular mobile communication system. Takano discloses “a command generator 180 at the base station 101 for generating and outputting the TPC bit for adjusting transmission power at the mobile unit 102 based upon adjusted transmission power received from the mobile unit 102” (column 9, lines 6-11). In other words, the base station 101 measures the transmission power of a signal received from the mobile unit 102. Based on the measured transmission power, the base station 101 sends a TPC bit to the mobile unit 102. The TPC bit indicates an adjustment to the transmission power level for the mobile station 102.

As discussed in previous Office Actions, forward link communication refers to communication from a base station to a mobile station and reverse link communication refers to communication from a mobile station to a base station. As discussed above, Takano discloses adjusting the transmission power from the mobile station 102 to the base station 101. Thus, the disclosure of Takano is limited to adjusting transmission power on the reverse link.

The Examiner directs the Applicant to adder 108 and adjuster 181 in Figure 1 and alleges that these components disclose “setting an initial power level on a forward link based on said interference measure” as recited in independent claim 1. However, Takano states that

“the adjuster 181 includes an adder 108, an amplifier 109 and a delay circuit 110 in the TPC bit feedback loop” (column 9, lines 32-35). The TPC bit feedback loop refers to “a feedback function of the TPC bit currently generated, adjust the power control error ϵ during the power control delay so as to generate an updated or appropriate TPC bit for transmission power which should be adjusted based upon the currently generated TPC bit of the mobile unit 102” (column 9, lines 21-27). Again, it is clear that the TPC bit is used exclusively to adjust transmission power for the reverse link.

The only use of the forward link disclosed by Takano is the sending of the TPC bit to the mobile unit 102 from the base station 101. However, as discussed in detail above, no adjustment to the transmission power level from the base station 101 to the mobile unit 102 is disclosed.

In view of the above, Applicant respectfully submits that Takano cannot disclose or suggest setting a “power level in a forward link” as recited in independent claims 1, 9, 15 and 21.

As such claims 2, 4, 8 and 22, dependent upon independent claims 1 and 21, respectively, are likewise allowable over Takano at least for the reasons given above with respect to claims 1 and 21.

Applicant respectfully requests that the Examiner withdraw this art grounds of rejection.

35 U.S.C. § 103 (A) TAKANO AND LOVE

Claims 3, 5, 6, 11, 12, 13, 17, 18, 19, 20, 23, 24 and 25 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over Takano and Love. Applicant respectfully traverses this art grounds of rejection.

Love is directed to a method for controlling the communication system forward link capacity by receiving gain information from at least one forward link, comparing the gain information with a gain threshold, and based on the comparison, adjusting an encoding rate of at least one of the forward links (Love, col. 3, ll. 11-19).

Love addresses signal interference by adjusting the forward link encoding rate (R) (Love, col. 4, ll. 56-57). The forward link signal received at the mobile station is maintained at a level to provide adequate frame error rates at the mobile station (Love, col. 4, ll. 57-60). At the same time, a gain that was decided to be adequate to overcome the interference is scaled by a factor (r), which is proportional to the square root of the new and previous encoding rate (Love, col. 4, ll. 60-64). Love states that dropping the encoding rate (R) allows a drop in gain in the forward link and as a result less interference is created (Love, col. 5, ll. 1-8). Thus when a mobile station detects a poor frame error rate, the mobile station requests a higher gain setting for its associated forward link signal.

Therefore, Love addresses the interference problem by changing the channel encoding rate, which results in a power decrease when a gain value is greater than a set threshold level. In Love, the gains are related to the power, which is related to the energy per chip multiplied by chip rate R_c (Love, col. 4, equation 2). Claims 1, 9, 15, and 21 set an initial power level in a forward link based on an interference measure.

Thus, Love fails to show, suggest, or teach setting the initial power level in a forward link based on an interference measure. Love changes the encoding rate, which results in an incidental power decrease.

Further, as discussed above, Takano discloses nothing related to power levels on a forward link. Thus, it is not clear why one skilled in the art would combine Takano's reverse link power transmission control method with the forward link encoding rate adjustment disclosed by Love. Rather, the Examiner appears to be using impermissible hindsight in a strained attempt to reconstruct the claimed invention.

In view of the above remarks, Applicant respectfully submits that the combination of Takano and Love cannot disclose or suggest setting a "power level in a forward link based on said interference measure" as recited in independent claims 1 and 21 and similarly recited in independent claim 9.

As such, claims 3, 5, 6, 11, 12, 13, 17, 18, 19, 20, 23, 24 and 25 dependent upon independent claims 1, 9, 15 and 21, respectively, are likewise allowable over Takano and Love at least for the reasons given above with respect to independent claims 1, 9, 15 and 21.

Applicant respectfully requests that the Examiner withdraw this art grounds of rejection.

35 U.S.C. § 103 (A) TAKANO AND MEIDAN

Claims 7, 14 and 26 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over Takano and Meidan. Applicant respectfully traverses this art grounds of rejection.

Meidan is directed to an apparatus containing an estimator means for estimating the carrier to interference power ratio of a slow frequency hopping signal by using input data samples of the hop to estimate a carrier to interference power ratio with a metric at least

comprising a monotonically related function (Meidan, col. 18, ll. 36-47). Meidan fails to show, suggest or teach setting the initial power level “in a forward link based on said interference measure” as recited in independent claims 1 and 21 and similarly recited in independent claim 9.

Further, it is not clear why one skilled in the art would combine Takano’s reverse link power transmission control method with the carrier to interference ratio estimator disclosed by Meidan. Rather, the Examiner appears to be using impermissible hindsight in a strained attempt to reconstruct the claimed invention.

In view of the above remarks, Applicant respectfully submits that the combination of Takano and Meidan cannot disclose or suggest setting a “power level in a forward link based on said interference measure” as recited in independent claims 1 and 21 and similarly recited in independent claim 9.

As such, claims 7, 14 and 26, dependent upon independent claims 1, 9 and 21, respectively, are likewise allowable over Takano and Meidan at least for the reasons given above with respect to independent claims 1, 9 and 21.

Applicant respectfully requests the Examiner withdraw this art grounds of rejection.

35 U.S.C. § 103 (A) TAKANO AND NAKANO

Claims 10 and 16 stand rejected under 35 U.S.C. § 103 (a) as being unpatentable over Takano and Nakano. Applicant respectfully traverses this art grounds of rejection.

Nakano is directed to a method for controlling a mobile unit’s power transmission, where a base station includes a pilot signal generating circuit for generating a pilot signal that has a constant transmission power level and where the mobile units include a pilot signal reception level measuring circuit for measuring reception power of the received pilot signal.

The mobile units have a transmission power control circuit for controlling transmission power of a power amplification circuit based on the measured reception power of the received pilot signal (Nakano, Abstract). Thus, Nakano fails to show, suggest or teach setting the initial power level in a forward link based on an interference measure.

Further, as discussed above, Takano discloses nothing related to power levels on a forward link. Thus, Applicant respectfully submits that the combination of Takano and Nakano cannot disclose or suggest setting a “power level in a forward link traffic channel transmission based on said interference measure” as recited in independent claims 9 and 15.

As such, claims 10 and 16, dependent upon independent claims 9 and 15, respectively, are likewise allowable over Takano and Nakano at least for the reasons given above with respect to independent claims 9 and 15.

Applicant respectfully requests that the Examiner withdraw this art grounds of rejection.

Reconsideration and allowance of all pending is respectfully requested.

CONCLUSION

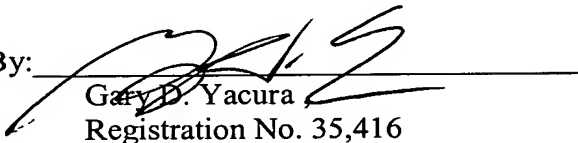
In the event that there are any outstanding matters remaining in the present application, the Examiner is invited to contact Gary Yacura at (703) 668-8023 in the Washington, D.C. area, to discuss the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. 1.16 or under 37 C.F.R. 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY & PIERCE, P.L.C.

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